



Testimony

Submitted on behalf of the
Pennsylvania Chamber of Business and Industry

Public Hearing on Energy Reliability & Costs for Consumers

Before the:
Pennsylvania Senate Democratic Policy Committee

Presented by:

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Good morning, Chairman Miller and honorable members of the Senate Democratic Policy Committee, my name is Amy Brinton, and I am Director of Government Affairs for the Pennsylvania Chamber of Business and Industry. The PA Chamber is the largest, broad-based business advocacy association in Pennsylvania. We represent employers of all sizes, crossing all industry sectors throughout the Commonwealth and include companies involved in all aspects of the energy industry and beyond.

Thank you for the opportunity to testify today regarding the challenges and opportunities before us with respect to energy reliability and affordability in Pennsylvania.

Pennsylvania's Energy Portfolio

Pennsylvania has long been a cornerstone of the nation's energy and manufacturing landscape, playing a critical role in powering the U.S. and supporting economic and industrial growth. Pennsylvania's energy sector supports thousands of jobs, contributes billions to our economy, and provides affordable energy to residents and businesses throughout the Commonwealth. From natural gas and electricity exports to essential construction materials, we are a key player in both the national and global economy.

In fact, Pennsylvania is currently the top electricity exporter and top supplier of natural gas, coal, and refined petroleum products. We are the second-largest natural gas-producing state, reaching almost 7.6 trillion cubic feet in 2023; the second largest, after Texas, net supplier of energy to other states; and third largest producer of electricity in the nation, with only Texas and Florida producing more.¹

For much of our energy history, coal-fired power served as the backbone of our energy portfolio, providing a significant portion of reliable electricity that powered homes, businesses, and industries across the state and beyond. As one of the nation's leading coal producers, we relied heavily on this resource to fuel our economy and energy needs. However, in recent years, this landscape has shifted dramatically. Many of our coal-fired plants have come offline due to a combination of market forces, environmental regulations, and increasing economic viability of alternative energy sources. This, combined with increased natural gas development in Marcellus Shale, has seen natural gas emerge as the dominant source of electricity generation in the state.

The shift away from coal and the rise of natural gas have significantly reshaped Pennsylvania’s energy landscape, as illustrated in the chart below. In 2001, coal was the dominant energy source, accounting for 57 percent of Pennsylvania's electricity net generation, while natural gas made up only 1.5 percent. By 2023, however, this trend drastically changed with coal’s share dropping to 5.4 percent, and natural gas surging to become the dominant source, comprising 59 percent of the state’s net generation, with nuclear power accounting for 31.9 percent, and renewables at 3.3 percent.¹

Fuel Source	2001	2005	2010	2015	2020	2023
Coal	57.0	55.5	48.0	30.1	10.2	5.4
Nuclear	37.5	35.0	33.9	37.5	33.2	31.9
Natural Gas	1.5	5.0	14.7	27.7	52.5	59.0
Renewables	1.5	1.8	2.6	3.7	4.0	3.3
Other	2.5	2.7	0.8	1.0	0.4	0.4

Source: US EIA Electricity Data Browser

It is also important to note that this shift to natural gas has also helped to reduce Pennsylvania’s Power sector CO2 emissions by 46 percent between 2005 and 2020, far out pacing the transportation and industrial sectors.²

PJM in Pennsylvania³

In addition to being a leader in generating and exporting energy, Pennsylvania is also home to PJM Interconnection, the organization responsible for managing the grid and ensuring the reliability of power supply across a region that includes 13 states and the District of Columbia, serving over 65 million people.

¹ <https://www.eia.gov/state/analysis.php?sid=PA>

² [PA Greenhouse Gas Inventory Report, DEP, 2023](#)

³ <https://www.pjm.com/about-pjm/who-we-are>

As the regional transmission organization (RTO), PJM is responsible for coordinating the generation and transmission of electricity, ensuring that supply consistently meets demand across its vast footprint. It operates the world’s largest competitive wholesale electricity market, where energy producers and consumers buy and sell electricity at market-based rates. PJM also oversees grid reliability by forecasting energy needs, managing the dispatch of power plants, and coordinating the flow of electricity across thousands of miles of transmission lines. They are tasked with maintaining a reliable, affordable, and sustainable energy supply for millions of people and businesses and must ensure that the grid remains stable by balancing electricity generation with consumption in real-time, while also planning for future growth and addressing emerging energy challenges.

Looming Generation Shortfall

In 2023, PJM published, “Energy Transition in PJM: Resource Retirements, Replacements and Risks”, which predicts a resource adequacy shortfall due to a potential “timing mismatch” between resource retirements, load growth, and new generation.

PJM’s report indicated that accelerated retirements of thermal generation resources, which have long served as the backbone of our grid, is outpacing integration of new generation capacity. In 2024, PJM forecasted an average net energy load growth of 2.3 percent per year over the next 10-years, and 2.2 percent over the next 15-years, largely due to the recent rise in AI and data centers, electric vehicles, and the overall electrification of society.⁴

These trends are expected to persist, further widening the gap between available energy supply and growing energy demand. The mismatch in timing between the retirement of resources and the integration of new energy sources poses a significant risk to the reliability and affordability of energy in Pennsylvania. As these plants retire, they are not being replaced quickly enough, nor are new generation sources able to produce the capacity needed to fill the “energy gaps” left by the retirement of these plants. As such, it is critical that we act now to address this shortfall and ensure a stable energy future for Pennsylvania.

⁴ [PJM Load Forecast Report, 2024](#)

Resource Adequacy: Implications for Pennsylvania's Businesses and Economy

An energy capacity shortfall in Pennsylvania will have significant ramifications for the state's businesses and economy. As the demand for electricity continues to grow, a failure to ensure an adequate and reliable energy supply could lead to supply shortages, power outages, and price volatility. For businesses, this instability is a major concern, particularly for industries that rely on a consistent and affordable energy supply to operate. Manufacturing plants, data centers, healthcare facilities, and other critical infrastructure are at risk if the grid cannot meet demand, leading to potential disruptions in production, delays, and financial losses.

The impact of a generation shortfall goes beyond the immediate disruption of business operations and threatens Pennsylvania's overall economic competitiveness. The uncertainty surrounding energy availability makes the state less attractive for new investment, particularly for energy-intensive industries that rely on reliable and affordable energy. If Pennsylvania experiences frequent power outages or rising energy prices due to insufficient generation capacity, businesses will be deterred from expanding or relocating here, ultimately slowing economic growth and reducing job creation.

Additionally, higher electricity prices driven by supply shortages would raise operating costs for businesses across various sectors, forcing them to either pass these costs on to consumers or attempt to absorb them, possibly by reducing investments in their workplaces and workforce. Small and medium-sized businesses would be especially vulnerable to energy price spikes, and as energy costs rise, businesses may be less inclined to invest in expansion or innovation—two key drivers of long-term economic growth.

The financial strain of reliability issues will also be felt by Pennsylvania's residents. Power outages and rising energy costs directly impact consumers, who will be faced with higher utility bills and power-related disruptions in their daily lives. This, in turn, could lead to a reduction in consumer spending, which is a major driver of the state's economy. As both businesses and residents feel the economic consequences of an energy shortfall, Pennsylvania would likely experience slower economic growth, see a reduction in job creation, and a decline in overall quality of life.

With all these factors in play, we must plan for an energy future that can meet growing demand while maintaining the reliability and affordability on which residents and businesses depend. This means not only addressing capacity shortfalls and aging infrastructure but investing in innovative solutions to maximize existing energy resources and diversify our energy mix to ensure that we have the flexibility to adapt to future challenges.

The combination of population growth, economic development, climate-related weather events, electrification trends, and digital transformation will continue to shape energy needs in our region. It is crucial that we proactively address these trends through comprehensive energy planning, modernization of the grid, and investment in reliable generation sources to ensure we can meet demand.

Pennsylvania is a global energy leader and a critical hub for both traditional and emerging energy markets. With this projected shortfall looming in the PJM region, we are uniquely positioned to play a key role in addressing this urgent issue and ensure affordable and reliable energy throughout the Commonwealth. As such, the PA Chamber supports an all-of-the-above energy policy/strategy that strengthens our status as a global energy leader, while allowing our energy sector leaders to innovate and thrive. This includes leveraging our existing baseload resources while supporting energy innovation and new technologies, such as hydrogen and small modular reactors (SMRs), to power both our economy and communities throughout the Commonwealth.

Filling the Energy Gap

Pennsylvania, with our diverse industrial base, is home to key sectors such as manufacturing, technology, and healthcare, all of which rely on a stable, affordable energy supply to fuel their operations. As new businesses emerge and existing ones grow, the need to ensure reliable and affordable energy to power facilities, factories, and offices will only intensify.

To ensure that Pennsylvania's energy remains both reliable and affordable, the Commonwealth should adopt a comprehensive energy policy that balances environmental goals with economic considerations and grid reliability, without discriminating against reliable thermal generation (e.g., via carbon taxes). Pennsylvania's energy strategy should include a directive for administration

officials and personnel to focus specifically on the development and sustained implementation of the energy policy, potentially, through the creation of an energy-centric department or agency, either as an independent agency, as part of the Governor's Administration (e.g., PA Department of Energy), or as a more prominent office/department with the PA Department of Environmental Protection (DEP). The creation of such an entity would serve as a dedicated, centralized body, comprised of subject matter experts, working to address the diverse and evolving energy needs of Pennsylvania, and ensure that the state's energy future is secure, sustainable, and economically viable.

Pennsylvania's energy plan must protect and expand job opportunities, promote economic growth and investment, and prioritize capital investment while also investing in reliable baseload generation to ensure adequate and affordable energy to power our economy. This should include initiatives that help facilitate investment in reliable thermal generation projects at the sites of recently or soon-to-be-retired thermal plants; expanding the definition of eligible projects for EDGE Tax Credits to support new generation projects; and initiatives that encourage innovation and competition across all energy sources, fostering a free and balanced energy market without favoring any particular energy technology or source.

It is vital that, as part of a state energy plan, we leverage and utilize our existing thermal baseload resources (e.g., coal, natural gas, and nuclear) to their full and maximum potential, as most new "replacement energy" projects currently being proposed and constructed are generally inverter-based resources like wind and solar. While inverter-based projects provide some energy to fill these gaps and should certainly be part of Pennsylvania's all-of-the above energy plan/strategy, these resources do not yet provide the same operational features that are crucial for maintaining grid reliability. Without sufficient and reliable replacement generation from traditional baseload resources, available, dispatchable energy that can be quickly deployed to meet demand, can be diminished and will put reliability at risk, especially during peak demand periods.

With natural gas currently serving as Pennsylvania's primary baseload energy source, it offers a unique opportunity to ensure grid stability and meet demand. Our proximity to abundant Marcellus Shale gas supplies enables more cost-effective and reliable baseload power generation. However, to fully harness the potential of Pennsylvania's natural gas resources, continued investment in infrastructure and policies that promote its responsible use are essential.

Key policies should encourage investment in carbon capture and storage (CCS) technologies, promote the development of renewable natural gas, and support workforce development programs to ensure workers are equipped with the necessary skills for both natural gas and clean energy sectors. Additionally, upgrading and modernizing natural gas delivery infrastructure, including pipelines, storage facilities, and processing plants, is essential to ensuring grid resiliency. Encouraging new pipeline projects improves access to natural gas, strengthens the connectivity of Pennsylvania's pipeline network with neighboring states, and helps diversify the energy supply while reducing the risk of disruptions.

Maintaining thermal generation sources, such as coal, natural gas, and nuclear, alongside renewable energy, ensures reliable baseload power and further supports grid stability. At the same time, policies and initiatives that support investments in modernizing and expanding Pennsylvania's electric grid improve the integration of renewable energy projects, address the growing demand for energy, reduces the risk of outages and facilitates a more efficient transmission of energy. Together, these efforts will help ensure access to reliable and affordable energy that is vital to Pennsylvania's economy and residents.

Permitting Reform in Pennsylvania

Pennsylvania has many advantages and the potential for national and global leadership in economic growth; yet too often we lose to other states in business attraction, thus forfeiting jobs, tax revenue, and prosperity. Employers consider numerous factors when evaluating locations to start or grow a business. When Pennsylvania is not selected, one of the most common factors cited is concerns over lengthy and arduous state permitting processes, particularly at the DEP and the Conservation Districts to which DEP may delegate authority.

We appreciate the Shapiro administration's focus on improving permitting. In 2024, as part of the FY 2024-2025 Budget, lawmakers built on the Governor's efforts and continued the process of improving state permitting, codifying a number of the Governor's executive actions and enacting the Streamlining Permits for Economic Expansion and Development (SPEED) Act. The SPEED Act establishes a program at DEP that allows permit applicants to utilize a qualified third-party professional to expedite review applications for a range of air, land and water permits. SPEED is key in fostering economic growth in Pennsylvania, helping to streamline processes for energy generation, grid development, and the deployment of renewable technologies, ultimately positioning Pennsylvania to maintain its status as a leader in energy innovation.

However, to fully realize the potential of the SPEED program and attract new businesses and developments to the state, additional permitting reform is crucial. Currently, the permitting process for new energy projects can be complex and time-consuming. Delays in permitting can increase costs, discourage investment, and hinder the state's ability to meet its energy goals. By reforming the permitting process to make it more efficient and predictable, Pennsylvania can create a more business-friendly environment that attracts both local and out-of-state companies eager to contribute to the state's clean energy future.

With clear, consistent regulations and faster approval processes, businesses will be more likely to choose Pennsylvania as the location for their projects, leading to job creation, economic development, and a stronger, more resilient energy future. In this way, permitting reform is an essential step toward realizing both the full potential of the SPEED program and ensuring that Pennsylvania remains an attractive destination for energy investments and the businesses that drive them.

Working Together to Ensure a Reliable and Affordable Energy Future

Pennsylvania stands at a critical crossroads in shaping both our own energy future and the nation's energy future. As the demand for electricity continues to grow and the transition away from certain thermal energy sources accelerates, it is imperative that our grid remains reliable, affordable, and capable of supporting the diverse industries that drive our economy.

A comprehensive, all-of-the-above energy strategy that maximizes the use of Pennsylvania's reliable thermal baseload sources while balancing additional renewable energy sources is essential for maintaining grid stability and fostering long-term economic growth. In addition to slowing down the retirement of some coal-fired generation facilities, we must also recognize the significant role that natural gas, with its abundant and cost-effective supply, and nuclear energy play in Pennsylvania's baseload source portfolio. These reliable thermal sources help to ensure we are able to meet demand and provide reliable energy during peak periods.

Additionally, modernization of our energy infrastructure, additional permitting reforms, and providing certain incentives for capital investments are necessary to expedite the deployment of new energy projects, so Pennsylvania remains competitive in attracting new investment. Recent steps taken with permitting reform and the SPEED Act are positive, however, more needs to be done to streamline the permitting process and make Pennsylvania an even more attractive destination for businesses and energy investments and innovations.

The PA Chamber of Business and Industry is committed and is looking forward to working with policymakers, industry leaders, and stakeholders to address these challenges and continue to position Pennsylvania as a current and future energy leader. By embracing a forward-thinking energy policy that combines innovation, reliability, and economic growth, we can ensure a prosperous energy and economic future for all Pennsylvanians.

Thank you for your time and attention today, and I look forward to continuing this important conversation and am happy to take any questions at this time.